

Comparison of options -- SMS Revisions for background and human health

| Option 1 – MTCA Approach | Option 2 – Conditional Range |
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| <p>Highest of:</p> <ul style="list-style-type: none"> Risk-based sediment concentration on MTCA levels of protection*. “Natural background” Practical Quantitation Limit <p>Alternative method: Cleanup standards up to 1×10^{-5} risk level for single chemical/pathway (Method C) if not technically possible to meet lower standard, or if meeting lower risk level likely to create greater threat to human health or the environment.</p> | <p>Persistent, ubiquitous, uncontrollable contaminants at regional scale.</p> <p>1. Not technically possible. OR 2. Likely to recontaminate, AND a. PLP is not source of recontamination. b. Identifiable and significant sources controlled to the extent possible.</p> <p>Goal</p> |
| Advantages | Advantages |
| <ul style="list-style-type: none"> Consistent with MTCA rule approach. Media at site treated in same manner, except for benthic toxicity. Cost not considered when setting cleanup standards. May result in lower cleanup standards. May be able to achieve lower standards if use dredging/capping combination. Simplified process, relative to other options. Easier to compare remedy options. More predictability for PLP and public. | <ul style="list-style-type: none"> For many sites, cleanup standards would be consistent with MTCA rule approach. Allows flexibility in cases where cleanup standards are not technically possible to achieve or in urban and industrial environments where there are ubiquitous, uncontrollable contaminants. Provides incentive to identify and control sources of contamination. Will lay out a process to provide predictability for PLP. May have simplified process for some sites, more complex process only if cleanup standards are not attainable or sustainable. May result in cleanup standards that are more attainable, allowing more cleanup actions to be completed. |
| Disadvantages | Disadvantages |
| <ul style="list-style-type: none"> Not consistent with SMS approach. More difficult to apply to other sections of SMS rule. Dredging, capping, institutional controls may not be viable for all sediment sites. Cleanup standards may not be technically possible, may be very expensive – increasing the number of interim actions. More interim actions means longer time to site closure, increased workload managing sites. If PLP cannot resolve liability, less incentive to cooperate with cleanup. Sites may become recontaminated. Cleanup standards that are not sustainable may not be economically justified. Risk reduction may be “on paper” due to delays, interim actions, recontamination. | <ul style="list-style-type: none"> Approach is not completely consistent with either MTCA or SMS approaches. Sediment cleanup standards may be set higher at some sites, but does not necessarily mean long-term concentrations at site would be any higher. Process may be more complicated at some sites and require more data and analysis. Less predictable for PLPs and public. It may be costly and create additional workload to identify and control sources of contamination to site. May be difficult to define “regional background” such that it is clear and applied to many different types of water bodies. May be costly to determine regional background concentrations. |

*MTCA Levels of Protection -- Lowest concentration based on reasonable maximum exposure of most sensitive population with:

- 1×10^{-6} cancer risk for single chemical and single exposure pathway; and 1×10^{-5} cancer risk for multiple chemicals and/or multiple exposure pathways.
- Hazard quotient of 1 for single non-carcinogenic chemical and single exposure pathway; and Hazard index of 1 for multiple non-carcinogenic chemicals and/or multiple exposure pathways.